

## ABSTRACT OF THE DISCLOSURE

A plasma density information measuring method capable of easily measuring the plasma density information over the long term, a probe for measuring the plasma density information, and a plasma density information measuring apparatus are disclosed. A measuring probe is set such that a tip end of a glass tube of the measuring probe is brought into contact with plasma PM to be measured. High-frequency power sent through a coaxial cable is supplied to the plasma PM from a loop antenna through a wall of the tube, and reflection power of the high-frequency power is received by the loop antenna to obtain a counter frequency variation of reflection coefficient of the high-frequency power. In the obtained reflection coefficient, a portion thereof in which the reflection coefficient is largely reduced is a peak at which strong absorption of high-frequency power is caused due to the plasma density. The plasma density can be obtained from the plasma absorption frequency.

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